APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,386	01/13/2000	Li-Wen Chen	19608-000230US	8309

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EXAMINER
COLBERT, ELLA

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)	
Office Action Summary	09/483,386		CHEN, LI-WEN	
	Examiner		Art Unit	
	Ella Colbert		3624	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _12 June 2003_ .

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-7,11-15,20-24,29-33 and 38-42_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-7,11-15,20-24,30-33,38,41 and 42_ is/are rejected.

7) ☒ Claim(s) _29, 39, and 40_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-6, 11-15, 20-24, 29-33, and 38-42 are pending. Claims 8-10, 16-19,

25-28, and 34-37 have been canceled, claims 1-6, 11-15, 20-24, 29-31, 33, and 38

have been amended, and claims 39-42 have been added in this communication filed

06/12/03 entered as Amendment A, paper no. 8.

2.   The Terminal Disclaimer filed on 06/12/03 and has been entered as paper no. 9.

The Non-statutory double patenting rejection still stands because though the claims

were amended and some claims were cancelled the claims in the co-pending

applications 09/438,182 and 09/483,385 are not distinctly different enough to have the

Non-statutory double patenting rejection withdrawn. It is suggested Applicant either

amend the claims in the co-pending applications 09/438,182 and 09/483,385 to more

clearly distinguish the novel features of each of the co-pending applications or

incorporate some of the apparatus claims from the co-pending '182 application and

some of the method claims from the co-pending '385 application into the computer

program product 09/483,386.

3.   The Claim Objections to claims 4 and 14 has been overcome by Applicant's

amendment to claims 4 and 14 and is hereby with drawn.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created

doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,

418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be

used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly

owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a

terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with

37 CFR 3.73(b).

5.   Claims 1-6, 11-15, 20-22, 24, 29-33, and 38-42 are provisionally rejected under

the judicially created doctrine of double patenting over claims 1-6, 11-15, 20-24, 29-33,

and 38-41 of copending Application No. 09/483,385 and claims 1-6, 11-15, 20-24, 29-

33, and 38-41 of copending Application No. 09/483,182. This is a provisional double

patenting rejection since the conflicting claims have not yet been patented.

6.   The subject matter claimed in the instant application is fully disclosed in the

referenced copending application 09/483,385 and copending application 09/483,182

and would be covered by any patent granted on that copending application since the

referenced copending application and the instant application are claiming common

subject matter, as follows: creating a multi dimensional report from information in a

database, receiving a definition of a customer profile, receiving from a user input

indicating a report configuration selection, creating a first dimension table, and creating a fact table.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

This is a <u>provisional</u> obviousness-type double patenting rejection.

The co-pending Application '385 claims 1-6, 11-15, 20-24, 29-33, and 38-41 claim a method for performing the steps of creating a multi dimensional report from information in a database and the co-pending Application '182 claims 1-6, 11-15, 20-24, 29-33, and 38-41 claim an apparatus for performing the steps of creating a multi dimensional report from information in a database. The claim limitations in the '385 and '182 co-pending applications are substantially the same as the instant application.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-4, 11-14, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,799,286) Morgan et al, hereafter Morgan in view of (US

6,377,993) Brandt et al, hereafter Brandt and further in view of (US 6,212,524) Weissman et al, hereafter Weissman.

With respect to claims 1 and 11, Morgan teaches, A computer program product (col. 4, lines 7-67, col. 5, lines 1-28, and col. 12, lines 12-30) for analyzing information in at least one source database (col. 1, lines 50-56), said computer program product comprising: code for receiving a definition of at least one of a plurality of customer profile groups (col. 2, lines 1-16); and code for receiving input indicating at least one quantity of interest in the information (col. 8, lines 32-66 and col. 9, lines 1-25) and a computer readable storage medium for containing the codes (col. 4, lines 44-49).

Morgan did not teach, code for receiving a definition for a data model; and code for dynamically creating at least one generated database based upon the data model and configured to the quantity of interest further comprising: code for creating at least one first dimension table based upon the data schema and the quantity of interest; and code for creating at least one fact table based upon the data schema and the quantity of interest and the information.

Brandt discloses, code for receiving a definition for a data model (col. 19, lines 52-67 and col. 20, lines 1-18); and code for dynamically creating at least one generated database based upon the data model and configured to the quantity of interest further comprising: code for creating at least one first dimension table based upon the data schema and the quantity of interest; and code for creating at least one fact table based upon the data schema and the quantity of interest and the information (col. 3, lines 48-61, col. 20, lines 19-67, and col. 21, lines 1-17). It would have been obvious to one

having ordinary skill in the art at the time the invention was made to have code for receiving a definition for a data model; and code for dynamically creating at least one generated database based upon the data model and configured to the quantity of interest further comprising: code for creating at least one first dimension table based upon the data schema and the quantity of interest; and code for creating at least one fact table based upon the data schema and the quantity of interest and the information and to modify in Morgan because such a modification would allow Morgan to have a Datamart that supports customized data access.

Morgan and Brandt did not teach, code for displaying at least a portion of the dynamically generated database.

Weissman discloses, code for displaying at least a portion of the dynamically generated database (col. 15, lines 8-14, col. 26, lines 25-42 and col. 37, lines 11-16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have code for displaying at least a portion of the dynamically generated database and to modify in Morgan and Brandt because such a modification would allow Morgan and Brandt to have a datamart that is in a star schema associated with a dimension table stored in a database that can be displayed to a user.

With respect to claims 2 and 12, Morgan teaches, The computer program product of claim 1 further comprising code for generating a customer profile report and wherein the information comprises business performance measures (col. 7, lines 40-56, col. 9, lines 1-22, fig. 8 &fig. 18B), and wherein: code for creating at least one first dimension table further comprises: code for creating a customer profile hierarchy; and

code for creating at least one fact table further comprises: code for aggregating said

business performance measures according to said customer profile hierarchy (col. 5,

lines 36-63).

With respect to claims 3 and 13, The computer program product of claim 1 report

further comprising code for generating an operation report (col. 7, lines 40-56, col. 9,

lines 1-22, and fig. 8 & fig. 18B).

Morgan and Brandt did not teach, wherein the information comprises business

performance measures and wherein: code creating at least one fact table further

comprises: code for aggregating said business performance measures; and code for

filtering said customer profiles.

Weissman discloses, wherein the information comprises business performance

measures and wherein: code creating at least one fact table further comprises: code for

aggregating said business performance measures; and code for filtering said customer

profiles (col. 15, lines 8-14 and lines 34-65 and col. 26, lines 25-42). It would have been

obvious to one having ordinary skill in the art at the time the invention was made to

have the information comprise business performance measures and wherein: code

creating at least one fact table further comprises: code for aggregating said business

performance measures; and code for filtering said customer profiles and to modify in

Morgan and Brandt because such a modification would allow Morgan and Brandt to

have the fact table key point to the fact table and the aggregate group to define a set of

aggregates to be built for a constellation.

With respect to claims 4 and 14, Morgan and Brandt did not teach, The computer program product of claim 1 further comprising code for generating a customer behavior report, and wherein the information comprises customer records, and wherein: code for creating at least one first dimension table further comprises: code for creating at least one of a plurality of customer profiling dimensions based upon the at least one of a plurality of customer profile groups; and said code for creating at least one fact table further comprises: code for aggregating customer records based on at least one of a plurality of customer profiling dimensions.

Weissman discloses, The computer program product of claim 1 further comprising code for generating a customer behavior report, and wherein the information comprises customer records, and wherein: code for creating at least one first dimension table (col. 14, lines 9-67, col. 15, lines 8-14 and col. 26, lines 25-42) further comprises: code for creating at least one of a plurality of customer profiling dimensions based upon the at least one of a plurality of customer profile groups and said code for creating at least one fact table further comprises: code for aggregating customer records based on at least one of a plurality of customer profiling dimensions (col. 7, lines 64-67, col. 8, lines 1-25, and col. 10, lines 24-42).

9.   Claims 5, 6, 15, 24, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Brandt, and Weissman in view of (US 5,615,109) Eder.

With respect to claims 5, 15, 24, and 33, Morgan and Brandt did not teach, The computer program product of claim 1 further comprising: code for creating a list of

customers for each one of the plurality of customer profile groups; code for creating at least one intermediary data structure to manage the list of customers; and code for creating customer classification components in a meta model for each customer profile group.

Weissman discloses, The computer program product of claim 1 further comprising: code for creating a list of customers for each one of the plurality of customer profile groups (col. 12, lines 63-67, col.13, lines 1-11, col. 35, lines 5-12 and col. 35, lines 30-54, and figs. 8-10) and code for creating at least one intermediary data structure to manage the list of customers (col. 34, lines 33-63).

Morgan, Brandt, and Weissman did not teach, code for creating customer classification components in a meta model for each customer profile group.

Eder discloses, code for creating customer classification components in a meta model for each customer profile group (col. 13, lines 1-20- shows a meta model for each profile group). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have code for creating customer classification components in a meta model for each customer profile group and to modify in Morgan, Brandt, and Weissman because such a modification would allow Morgan, Brandt, and Weissman to show a measure for the firm's financial performance during prior periods when data input has been completed.

With respect to claim 6, Morgan, Weissman, and Eder did not teach, The computer program product of claim 1 wherein said information comprises at least one of

telecommunications information, financial information, retail marketing information, insurance information, and healthcare information.

Brandt discloses, The computer program product of claim 1 wherein said information comprises at least one of telecommunications information, financial information, retail marketing information, insurance information, and healthcare information (col. 5, lines 56-61, col. 18, lines 6-35, and col. 6, lines 7-9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have information comprises at least one of telecommunications information, financial information, retail marketing information, insurance information, and healthcare information and to modify in Morgan, Weissman, and Eder because such a modification would allow Morgan, Weissman, and Eder to have a network with telecommunications information defining the physical network to satisfy the data volume requirements and to have metadata in a datamart that includes financial information, retail marketing information, insurance information, and healthcare information for a business organization.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 20-23, 31, 32, 38, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,212,524) Weissman et al, hereafter Weissman in view of (US 5,799,286) Morgan et al, hereafter Morgan.

With respect to claim 20, Weissman teaches, A computer program product for analyzing information in a first database, said first database organized according to a first data schema model, said computer program product comprising: code for defining a virtual data model definition (col. 7, lines 34-63); code for determining from the virtual data model a second data schema code for receiving as input a third data model definition (col. 10, lines 24-42); code for creating a third database having a third data schema from the third data model (col. 10, lines 63-67) and a computer readable storage medium for holding the codes (col. 4, lines 44-49).

Weissman did not teach, code for creating a first mapping, that provides for a translation for data from said first data schema to said second data schema to the third data schema; code for selectively migrating information from at least one of the first database to the second database according to the first mapping.

Morgan discloses, code for creating a first mapping, that provides for a translation for data from said first data schema to said second data schema to the third data schema (col. 5, lines 64-67 and col. 6, lines 1-13); and code for selectively migrating information from at least one of the first database to the second database according to the first mapping (col. 6, lines 37-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have code for creating a first mapping, that provides for a translation for data from said first data

schema to said second data schema to the third data schema; code for selectively

migrating information from at least one of the first database to the second database

according to the first mapping and to modify in Weissman because such a modification

would allow Weissman to have mapped data that basically identifies the management

organizations at a site in the second data schema and the first data schema to contain

personnel information or people mapping and the third data schema to contain cost.

With respect to claim 21, Weissman teaches, the computer program product of

claim 20 wherein said first data schema comprises a star schema (col. 7, lines 35-42

and col. 10, lines 29-35).

With respect to claims 22 and 31, Weissman teaches, the computer program

product of claim 20 wherein virtual data model comprises an identity centric data

organization (col. 2, lines 26).

With respect to claims 23 and 32, Weissman teaches, the computer program

product of claim 22 wherein said identity is a customer identity. (col. 26, lines 5-42).

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US

6,212,524) Weissman et al, hereafter Weissman in view of (US 6,377,993) Brandt et al,

Brandt.

With respect to claim 30, Weissman teaches, A computer program product for analyzing information from a database, said database organized according to a first data model, said computer program product comprising: Code for defining based upon a virtual data model a data warehouse (col. 1, lines 61-67, col. 6, lines 50-60, and fig. 1 (150)); code for receiving as input a definition of a second data model (col. 2, lines 27-39); code for creating a first mapping from said first data model to said data warehouse (col. 5, lines 14-25);code for creating a second mapping from said data warehouse to said second data model (col. 10, lines 24-42 and col. 18, lines 32-35); and a computer readable storage medium for containing the codes.

Weissman did not teach, code for analyzing information based upon said second data model, using the first mapping and the second mapping.

Brandt discloses, code for analyzing information based upon said second data model, using the first mapping and the second mapping (col. 23, lines 17-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have code for analyzing information based upon said second data model, using the first mapping and the second mapping and to modify in Weissman because such a modification would allow Weissman to have a request that has been mapped (first mapping) sent from the database to the mapping table (second mapping).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,212,524) Weissman et al, hereafter Weissman in view of (US 5,799,286) Morgan et al, hereafter Morgan.

With respect to claim 38, Weissman teaches, A system for visualizing information, said system comprising: an OLAP server (col. 6, line 67 and fig. 1 (150)); at least one data source (col. 7, lines 8 and 9 and fig. 1 (150)); a data warehouse (col. 7, line 4); at least one decision support computer, interoperable with said data warehouse, said at least one data source and said OLAP server (col. 7, lines 1-2 and lines 34-42); and migrate said data from said at least one data source to said data warehouse according to said mapping (col. 10, lines 24-42 and col. 18, lines 32-35); and provide said data to said OLAP server for display (col. 2, lines 26-38, col. 9, lines 43-67, and col. 10, lines 1-13).

Weissman did not teach, wherein said decision support computer is operatively disposed to: create a mapping based on a virtual schema, said mapping providing a translation for data in said at least one data source to said data warehouse.

Morgan discloses, wherein said decision support computer is operatively disposed to: create a mapping based on a virtual schema, said mapping providing a translation for data in said at least one data source to said data warehouse (col. 5, lines 64-67 and col. 6, lines 1-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the decision support computer is operatively disposed to: create a mapping based on a virtual schema, said mapping

providing a translation for data in said at least one data source to said data warehouse and to modify in Weissman because such a modification would allow Weissman to have the mapping data entry identify the management organization site in the datamart.

16.   Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over 6,212,524) Weissman et al, hereafter Weissman in view of (US 5,799,286) Morgan et al, hereafter Morgan and further in view of (US 6,377,993) Brandt et al, hereafter Brandt.

With respect to claim 41, Weissman did not teach, code for receiving a selection of targeted customer segment of interest as the quantity of interest.

Morgan discloses, code for receiving a selection of targeted customer segment of interest as the quantity of interest (col. 8, lines 32-66 and col. 9, lines 1-25)

Weissman did not teach, code for generating at least one of a plurality of target customer segment tables based upon the dynamically generated database.

Brandt discloses, code for generating at least one of a plurality of target customer segment tables based upon the dynamically generated database (col. 3, lines 48-61, col. 20, lines 19-67, col. 21, lines 1-17).

Wiessman teaches, code for providing the targeted customer segment tables to external applications (col. 14, lines 9-67, col. 15, lines 1-14, and col. 26, lines 5-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have code for receiving a selection of targeted customer segment of interest as the quantity of interest and to modify in Weissman because such a

modification would allow Weissman to have people module computations in a table for configuration planning.

Weissman and Morgan did not teach, code for generating at least one of a plurality of target customer segment tables based upon the dynamically generated database but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a state schema model including a fact table joined by a number of attendant tables known as dimensions.

With respect to claim 42, Weissman teaches, The computer program product of claim 1, wherein the dynamically generated database further comprises (col. 9, lines 45-48); Code for receiving an input from an on-line application processor (OLAP) (col. 9, lines 48-60); code for transforming the input into a database query based upon the data model; and code for providing information in response to the database query (col. 10, lines 5-13).

Allowable Subject Matter

17.   Claims 29, 39, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claims 29 reciting "virtual data model comprises a reverse star schema", claim 39 reciting "code for generating a data warehouse populated with the information from the source database and in accordance with the reverse star schema meta-model", and

claim 40 reciting "the meta-model schema is a reverse star schema" was not shown or suggested by the prior art of record.

Response to Arguments

18.   Applicant's arguments with respect to claims 1-6, 11-15, 20-24, 29-33, and 38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Roccaforte (US 6,484,179) disclosed multidimensional data in a relational database management system, a fact table, a mapping function and a multidimensional cube.

Castelli et al (US 5,978,788) disclosed an online analytical processing engine, mapping, a dimension table, a fact table, and data warehouse.

Colby et al (US 6,594,653) disclosed fact tables, aggregate views and tables, hierarchies, and dimension tables.

Inquiries

20.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday from 6:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for

the organization where this application or proceeding is assigned is (703) 305-7687 and

the Unofficial fax number is 703-746-5622.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-308-

1113.

E. Colbert
September 8, 2003